In the Claims

1. (Currently amended) A computerized method executable by an audio visual information system, the method comprising:

writing a data structure representing a description scheme for a multimedia sequence to a data store for subsequently querying the multimedia sequence, the ~~a~~ description scheme containing relations corresponding to relationships between entities in ~~a~~ the multimedia sequence, wherein the data structure comprises a graph having a set of vertices representing the entities and a set of edges representing the relations;

determining the relations for representation by parameters to define fuzzy relationships, each parameter having numerical values representing confidence in the corresponding fuzzy relationship;

obtaining at least one of

a numerical value for each parameter,

a description of the parameter containing a numerical value, and

a description capable of setting the parameter dynamically; and

modifying the numerical values representing the confidence in response to changes in the parameter as the multimedia sequence progresses, the numerical values calculated using a membership function $m_R(x) = g \circ f(x)$, where R is the set of edges over the set of vertices $A \times B$, g defines a function for the parameter over a parameter space PS, and f is a parameterization function $f: A \times B \rightarrow PS$, $g: PS$.

2. (Previously presented) The method of claim 1 further comprising:

combining an MPEG7 State DS (description scheme) with an additional field in an MPEG7 GraphType DS.

3. (Cancelled)

4. (Currently amended) The method of claim 1 further comprising:

running, by a user, a query on the data structure based on membership of an entity in one of the relations.

5. (Previously presented) A computer-readable medium having executable instructions to cause a computer to perform a method comprising:

writing a data structure representing a description scheme for a audio visual sequence to a data store for subsequently querying the audio visual sequence, the ~~a~~ description scheme containing relations corresponding to relationships between entities in ~~an~~ the audio visual sequence, wherein the data structure comprises a graph having a set of vertices representing the entities and a set of edges representing the relations;

determining the relations for representation by parameters to define fuzzy relationships, each parameter having numerical values representing confidence in the corresponding fuzzy relationship;

obtaining for each parameter at least one of

a numerical value,

a description of the parameter containing a numerical value, and

a description capable of setting the parameter dynamically; and

modifying the numerical values representing the confidence in response to changes in the parameter as the multimedia sequence progresses, the numerical values calculated using a membership function $m_R(x) = g \circ f(x)$, where R is the set of edges over the set of vertices $A \times B$, g defines a function for the parameter over a parameter space PS, and f is a parameterization function $f: A \times B \rightarrow PS$, $g: PS$.

6. (Previously presented) The computer-readable medium of claim 5, wherein the method further comprises:

combining an MPEG7 State DS (description scheme) with an additional field in an MPEG7 GraphType DS.

7. (Cancelled)

8. (Currently amended) The computer-readable medium of claim 5, wherein the method further comprises:

performing a query on the data structure based on membership of an entity in one of the relations.

9. (Currently amended) A computerized method executable by an audio video information system, the method comprising:

deriving a confidence value for a fuzzy relation from a parameter associated with one of a plurality of description schemes in a content description ~~for~~ representing a multimedia sequence, the confidence value representing a degree to which the fuzzy relation is a member of a subset of relations among the description schemes;

associating the description schemes with a set of vertices in a graph and the subset of relations with a set of edges among the set of vertices, wherein the graph is written to a data store for subsequently querying the multimedia sequence; and

modifying the confidence value in response to changes in the parameter as the multimedia sequence progresses, the confidence value calculated using a membership function $m_R(x) = g \circ f(x)$, where R is the set of edges over the set of vertices $A \times B$, g defines a function for the parameter over a parameter space PS, and f is a parameterization function $f : A \times B \rightarrow PS$, $g : PS$;.

10. (Previously presented) The method of claim 9, wherein the parameter is an attribute value.

11. (Previously amended) The method of claim 9, wherein the confidence value is further derived from a set of parameters associated with the description schemes.

12. (Cancelled)

13. (Previously presented) The method of claim 9, wherein the description schemes represent entities in the multimedia sequence, the fuzzy relation represents a relationship between the entities, and the confidence value represents a state of the relationship.

14. (Previously presented) The method of claim 13, wherein the state of the relationship is described by a state description scheme that specifies the parameter.

15-16. (Cancelled)

17. (Currently amended) The method of claim ~~15~~ 9 further comprising:

writing the graph without the edge representing the fuzzy relation if the confidence value is zero.

18. (Previously amended) A computer-readable medium having executable instruction to cause a computer to perform a method comprising:

deriving a confidence value for a fuzzy relation between description schemes from a parameter associated with one of the description schemes, the confidence value representing a degree to which the fuzzy relation is a member of a subset of relations among the description schemes in a content description ~~for~~ representing a multimedia sequence;

associating the description schemes with a set of vertices in a graph and the subset of relations with a set of edges among the set of vertices, wherein the graph is written to a data store for subsequently querying the multimedia sequence; and

modifying the confidence value in response to changes in the parameter as the multimedia sequence progresses, the confidence value calculated using a membership function $m_R(x) = g \circ f(x)$, where R is the set of edges over the set of vertices $A \times B$, g defines a function for the parameter over a parameter space PS, and f is a parameterization function $f: A \times B \rightarrow PS$, $g: PS$.

19. (Previously presented) The computer-readable medium of claim 18, wherein the parameter is an attribute value.

20. (Currently amended) The computer-readable medium of claim 18, wherein the confidence value is further derived from a set of parameters associated with the description schemes.

21. (Cancelled)

22. (Currently amended) The computer-readable medium of claim 18, wherein the description schemes represent entities in the multimedia sequence, the fuzzy relation represents a relationship between the entities, and the confidence value represents a state of the relationship.

23. (Previously presented) The computer-readable medium of claim 22, wherein the state of the relationship is described by a state description scheme that specifies the parameter.

24-25. (Cancelled)

26. (Currently amended) The computer-readable medium of claim ~~24~~18, wherein the method further comprises:

writing the graph without the edge representing the fuzzy relation if the confidence value is zero.